

Serial No.09/805,216:
Docket No.: HO4-3303/HO
Page 5

claims as amended are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicant hereby makes a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041(Whitham, Curtis and Christofferson. PC.).

Respectfully submitted,



Olga V. Merkulova
Registration No. 48,757

Tel. (703) 391-2510 or (703) 787-9400
Fax. (703) 391-9035 or (703) 787-7557



30743
PATENT TRADEMARK OFFICE

Clean Copy of Claims

The following is a clean copy of amended claims 2-3 and 12-13.

1 2. An ink jet recording device comprising:
2 a head formed with a plurality of nozzles;
3 a converting unit that converts recording data into driving data, the driving data including
4 data sets defining driving pulses for corresponding ones of the plurality of nozzles;
5 a feed unit that feeds a recording medium in a first direction;
6 an ejection element provided to each one of the plurality of nozzles for ejecting an ink
7 droplet from the corresponding nozzle onto the recording medium in response to the driving data
8 while the feed unit is feeding the recording medium in the first direction;
9 a memory that stores nozzle profile data including waveform data and timing data for
10 each of the plurality of nozzles, the waveform data and the timing data indicating a waveform
11 and a generating timing, respectively, of the driving pulse for each one of the plurality of nozzles,
12 wherein the converting unit converts the recording data into the driving data based on the nozzle
13 profile data, and each of the driving pulses is defined by a plurality of data sets of the driving
14 data; and
15 an updating unit that updates the waveform data for each of the plurality of nozzles when
16 a printing condition has been changed.

1 3. An ink jet recording device comprising:
2 a head formed with a plurality of nozzles;
3 a converting unit that converts recording data into driving data, the driving data including
4 data sets defining driving pulses for corresponding ones of the plurality of nozzles;
5 a feed unit that feeds a recording medium in a first direction;
6 an ejection element provided to each one of the plurality of nozzles for ejecting an ink
7 droplet from the corresponding nozzle onto the recording medium in response to the driving data

8 while the feed unit is feeding the recording medium in the first direction;

9 a memory that stores nozzle profile data including waveform data and timing data for

10 each of the plurality of nozzles, the waveform data and the timing data indicating a waveform

11 and a generating timing, respectively, of the driving pulse for each one of the plurality of nozzles,

12 wherein the converting unit converts the recording data into the driving data based on the nozzle

13 profile data, and each of the driving pulses is defined by a plurality of data sets of the driving

14 data;

15 a designating unit that designates a target ink amount of the ink droplet and a target

16 impact position on the recording medium on which the ink droplet impacts;

17 a measuring unit that measures a distance between the target impact position and an

18 actual impact position on the recording medium where the ink droplet has impacted with respect

19 to the first direction; and

20 an updating unit that updates the nozzle profile data based on the target impact position

21 and the distance measured by the measuring unit.

12. An ink jet recording device comprising:

2 a head formed with a plurality of nozzles;

3 a converting unit that converts recording data into driving data, the driving data including

4 data sets defining driving pulses for corresponding ones of the plurality of nozzles;

5 a feed unit that feeds a recording medium in a first direction;

6 an ejection element provided to each one of the plurality of nozzles for ejecting an ink

7 droplet from the corresponding nozzle onto the recording medium in response to the driving data

8 while the feed unit is feeding the recording medium in the first direction;

9 a memory that stores nozzle profile data including waveform data and timing data for

10 each of the plurality of nozzles, the waveform data and the timing data indicating a waveform

11 and a generating timing, respectively, of the driving pulse for each one of the plurality of nozzles,

12 wherein the converting unit converts the recording data into the driving data based on the nozzle

13 profile data, and each of the driving pulses is defined by a plurality of data sets of the driving

14 data; and
15 a leveling unit that levels generating timings of the driving pulses by changing the timing
16 data of the nozzle profile data.

1 13. An ink jet recording device comprising:
2 a head formed with a plurality of nozzles;
3 a converting unit that converts recording data into driving data, the driving data including
4 data sets defining driving pulses for corresponding ones of the plurality of nozzles;
5 a feed unit that feeds a recording medium in a first direction;
6 an ejection element provided to each one of the plurality of nozzles for ejecting an ink
7 droplet from the corresponding nozzle onto the recording medium in response to the driving data
8 while the feed unit is feeding the recording medium in the first direction;
9 a memory that stores nozzle profile data including waveform data and timing data for
10 each of the plurality of nozzles, the waveform data and the timing data indicating a waveform
11 and a generating timing, respectively, of the driving pulse for each one of the plurality of nozzles,
12 wherein the converting unit converts the recording data into the driving data based on the nozzle
13 profile data, and each of the driving pulses is defined by a plurality of data sets of the driving
14 data; and
15 a resolution changing unit that changes a time resolution, wherein each one of the
16 plurality of data sets of driving data having an original time resolution, and the resolution setting
17 unit that sets the original time resolution of each of the data sets to a predetermined time
18 resolution.